



**emtech**<sup>™</sup>

Water Based Coatings for a Changing World<sup>™</sup>

**NR4000 SERIES**

WATER BASED STAIN SYSTEM

Leed Credit ID: EQ4.1, EQ4.2, EQ4.5

## NR4000 Water Based Stain Series

<b>Description</b>	<p>Emtech® NR4000 (NR for Natural Resin) is made with a renewable resource, plant-based resin compound that offers ultra-low VOC emissions and is 100% biodegradable. The NR4000 base contains no hydrocarbon or ethylene based solvents, making it non-combustible and HAPs-Free. Due to the very small particle size of this unique resin structure, the NR4000 base allows for 100% color transparency in the dye stain versions, as well as excellent wetting and color transfer to the substrate when dye and pigment colorants are used to create translucent colors.</p> <p>The Clear Base version can be used to pop the grain figure and color of domestic and exotic hardwoods alike.</p>	
<b>Use</b>	<p>For use in furniture, cabinet, interior architectural and custom woodworking applications.</p>	
<b>Features &amp; Benefits</b>	<p>HAP's FREE          USEPA AIM National VOC Compliant          OTC / MRPO Regional Compliant          SCAQMD Regional Compliant          LEED Credit Compliant          Multi-Substrate Adhesion Performance          100% Burn-In Technology</p>	<p>Fast Dry-Time          Brush and Spray Friendly          Rich Color Tones          Water Clean Up          Non-Flammable          Can be used for Color Shading and Toning          Available in a Wide Array of Colors</p>
<b>Directions for Use</b>	<p>All surfaces to be finished must be clean and free of oil, dust and contamination that may cause fisheyes or poor adhesion. Clean surface with a solution of alcohol and fresh water mixed 1:1. Allow surface to thoroughly dry before proceeding. Fine sand surface to be finished with the appropriate grade sandpaper based on the type of final finish required. If the surface to be finished has a grain-filling type glaze, sealer or paste; ensure that the systems are compatible with one another by preparing a test panel before proceeding. Certain solvent-based fillers and glazes may prevent proper adhesion of the topcoat if not thoroughly cured. Ensure that grain fillers have been sanded with a minimum of 400-grit sandpaper and all contamination is removed. Oil-Based glazes should be airdried and tested to ensure proper early adhesion of the water based topcoat. Apply Emtech® NR4000 Water Based Stain with a clean cotton cloth or with a good quality synthetic-bristle paint brush. If spray-applying use a HVLP, Conventional or Airless/Air-assist spray equipment with the appropriate tip set size. Consult with your spray gun manufacturer for proper gun set-ups based on coating viscosity and intended use. Spray gun operators must wear a NIOSHA approved respirator during the spray application of this material. Consult the Material Safety Data Sheet of this material for safety and health procedures.</p>	
<b>Unfinished / New Wood</b>	<ol style="list-style-type: none"> <li>1. After surfaces has been prepared remove all dust with a wax/oil-free tack cloth.</li> <li>2. Mix Emtech® NR4000 Water Based Stain well before using.</li> <li>3. Emtech® NR4000 Stain can be applied without reducing with water or Target SA5 Spray Retarder. However, additions of SA5 Retarder may be required to slow-down the system if the stain is drying too quickly during high temperature applications.</li> <li>4. Reduce Emtech® NR4000 Stain upwards to 50% with water if lacquer is to be used as a pre-stain sealer or tie-coat between stain or dye coats to prevent color bleed.</li> <li>5. Apply the required number of coats of Emtech® NR4000 Stain to obtain the desired color strength. A minimum of 2 coats applied at 2 mils per wet coat may be required to obtain color consistency. There is no limit to the total number of coats of Emtech® NR4000 Stain that can be applied. Allow each coat to dry for a minimum of 60 minutes before recoating. Sanding between each coat is not necessary unless contamination has affected the film formation. Sand with 400-grit sandpaper to remove surface imperfections, runs, sags and contamination. Remove sanding dust as specified and apply final coat as required.</li> </ol>	



**Physical Specifications**

Coating Density: 8.60 lbs./Gal.	Solids % by Weight: 20.0%nv (clear format)
VOC Content: 51 Grams/Liter	VOC Content Regulatory: 117 Grams/Liter
HAPS Content: 0.0	pH: 8.5 – 9.0
Viscosity: 30 Sec Zahns #2 Cup	Appearance: Clear amber liquid
Dry Time: 60 minutes @ 2mils wet	Spread Rate: 400 sq ft. per Gallon @ 2mils wet
Flash Point: Above 212 °F	Shelf-Life: 24+ Months
Freeze/Thaw Cycles: 1+	Photochemical Reactivity: None

**Average Equipment Use Settings**

<b>Conventional Equipment Pressure:</b>	Reduce with tap water as needed. Nozzle size .039 inches (1.0 mm) -.047 inches (1.2mm) – atomizing air 30 –40 psi.
<b>HVLP Equipment Pressure:</b>	Reduce with tap water as needed. Nozzle size .039 inches (1.0mm) - .047 inches (1.2 mm) nozzle, atomizing air 20 - 25 psi.
<b>Air-Assist Airless Equipment Pressure:</b>	Reduce with tap water as needed. Tip size .009 - .011 inches, fluid pressure 200 psi – 400 psi, atomizing air 10 - 15 psi.

**Clean-Up Procedures**

All Target Coatings Emtech® Series finishes cleanup with fresh, warm water. Rinse spray gun fluid handing equipment thoroughly with a solution of water and alcohol mixed 1:1 after each use. If finish dries to hard film soak gun parts in alcohol to soften the hardened coating.

**Industrial Hygiene Requirements**

Use only in well ventilated areas. Avoid inhaling spray mist. Wear a NIOSH/MSHA approved respirator during spray applications.

**Emergency First-Aid**

**Ingestion:**  
Administer large amounts of water.  
DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

**Inhalation:**  
Remove exposed person(s) to well ventilated area. Treat symptomatically.

**Eyes:**  
Flush with fresh water. Seek medical attention.

**Skin:**  
Wash exposed area with warm, soapy water. Seek medical attention if irritation occurs.

Disclaimer: The information and suggestions are, to the best of our knowledge, reliable. Since the conditions of use are beyond our control, this company cannot assume responsibility for any risk or liabilities that may result from the use of its products.